II. EMISSIONS INFORMATION

The emission sources at the Veolia facility have the potential to emit particulate matter (PM), volatile organic materials (VOM), sulfur dioxide (SO_2), nitrogen oxides (NO_X), carbon monoxide (CO), and organic/inorganic hazardous air pollutants (HAPs). Emissions are generated from the storage and handling of waste in material processing areas, breathing and working losses from storage tanks, combustion of waste, combustion of natural gas and organic liquid transfer in piping. The process flow, emission unit descriptions and emission control information has not changed from that provided in the original Title V permit application. The following sections provide brief summaries of the pertinent process and emission rate information.

A. Hazardous Waste Combustors

Incineration units #2 and #3 are identical fixed-hearth incinerators with a two-stage combustion process and maximum heat input capacity of 16 MMBtu/hr each. Ignition of waste material takes place in the primary (lower) combustion chamber at temperatures in excess of 1,700 degrees F. A secondary (upper) combustion chamber serves as an "after-burner" for process gases. The secondary combustion chamber temperature is maintained at a minimum temperature of 1,800 degrees F. Natural gas is used as auxiliary fuel in both chambers to maintain minimum combustion chamber temperatures. Each unit is equipped with a spray dryer adsorber and fabric filter air pollution control system. The fabric filter for unit #2 has four baghouse chambers while the fabric filter for unit #3 has three baghouse chambers.

Incineration unit #4 is a rotary kiln equipped with a secondary combustion chamber and a maximum heat input capacity of 50 MMBtu/hr. Ignition of waste material takes place in the primary kiln at temperatures in excess of 1,500 degrees F. The secondary combustion chamber temperature is maintained above 1,880 degrees F. Natural gas is used as auxiliary fuel to maintain minimum combustion temperatures. This unit is equipped with an air pollution control system that consists of a tempering chamber, activated carbon injection, a spray dryer adsorber, and a fabric filter.

The incineration units generate emissions of PM, SO_2, NO_X, CO, VOM and organic/inorganic HAPs.

B. Material Processing Areas

Material processing involves repackaging of containerized solid wastes into smaller, more manageable containers for incineration. Some solid wastes may be received containing free liquids that may be aqueous or organic. During material processing, free liquids are fixed with an inert absorbent to facilitate repackaging. Material processing occurs at MP-1, MP-2, and the Lab Pack Repack Facility in Building 2B. These operations emit fugitive emissions in an enclosed building. VOMs and organic HAPs are emitted to the atmosphere through building/area exhaust fans.

C. Drum Crusher

Drums received that are unsuitable for reuse are crushed at the Drum Crusher after being emptied. These empty drums may contain residual organic material. Crushed drums are transported off-site for disposal. Fugitive emissions of VOM and organic HAP are emitted to the atmosphere.

D. Storage Tank Units

Bulk liquid wastes are stored at Tank Farm #1 and Tank Farm #3. All bulk liquid waste tanks are vertical, fixed-roof tanks equipped with carbon canisters for control of emissions. In addition, No. 2 fuel oil, kerosene, and gasoline are also stored onsite in tanks. Emissions from the liquid bulk storage and handling units are VOMs and organic HAPs. Storage tank emission units and their capacities are listed below.

Tank ID	Location	Capacity (gallons)
Tank #2	Tank Farm #1	4,931
Tank #4	Tank Farm #1	4,931
Tank #6	Tank Farm #1	7,200
Tank #8	Tank Farm #1	5,280
Tank #10	Tank Farm #1	12,869
Tank #20	Tank Farm #1	12,869
Tank #30	Tank Farm #1	12,869
Tank #40	Tank Farm #1	12,869
Tank #50	Tank Farm #1	12,869
Tank #60	Tank Farm #1	12,869
Tank #300	Tank Farm #3	30,000
Tank #302	Tank Farm #3	30,000
Tank #304	Tank Farm #3	30,000
Tank #306	Tank Farm #3	30,000
Tank #308	Tank Farm #3	30,000
Tank #310	Tank Farm #3	30,000
Tank #312	Tank Farm #3	10,000
Tank #314	Tank Farm #3	10,000
Tank #390	Tank Farm #3	30,000
Kerosene	South of Parking Lot	550
No. 2 Fuel Oil	South of Parking Lot	550
Gasoline	South of Parking Lot	550
No. 2 Fuel Oil	Fire Pump House	550

E. Bulk Feed Building

Bulk solid wastes are stored in four pits in the Bulk Feed Building. Solids stored in these pits are incinerated in Unit 4. Bulk solid wastes are moved from the pits to Unit 4 by a clamshell through an enclosed gallery. The activities within the building generate emissions of PM, VOM and organic/inorganic HAPs. The building exhaust is equipped with an air pollution control system that consists of a cyclone, two baghouses, and a carbon adsorption system.

F. Gasoline Storage Tank

Gasoline is stored in a 550-gallon horizontal tank for utilization by company vehicles. The tank is equipped with a submerged loading pipe. VOM emissions are generated from the tank.

G. Boiler #1

There is 10.6 MMBtu/hr natural gas boiler located north of Tank Farm #1. The boiler is used to generate heat and steam for on-site uses. The natural gas combustion in the boiler generates emissions of PM, SO_2, NO_X, CO, VOM and organic/inorganic HAPs. There is no emission control devices associated with this unit.

H. Fugitive Organic Emissions

Fugitive VOM and organic HAP emissions are generated by leaking equipment like valves, flanges, and pumps. Equipment components are inspected and monitored to minimize fugitive emissions from these sources.

I. Emergency Generators

An emergency generator that combusts #2 fuel oil is used for emergency power/energy requirements. The generator rating is less than 112 kilowatts or 150.2 horsepower. The maximum hourly design rate is approximately 0.4 MMBtu/hr. The generator is only used in the case of a power outage or natural gas curtailment. Nonemergency operation is limited to maintenance and testing that is necessary to maintain the readiness of the unit.

A second emergency generator is used to operate the fire water pump in the event of an onsite fire. This generator also combusts #2 fuel oil and has a maximum hourly design rate of approximately 0.4 MMBtu/hr (< 112 kilowatt rating).

When operated, the #2 fuel oil combustion generates emissions of PM, SO_2, NO_X, CO, VOM and organic/inorganic HAPs. There are no emission control devices associated with these units.

J. Insignificant Emission Units

The list of insignificant emission units contained in the original Title V permit no. V-IL-1716300103-08-01 is provided below. No insignificant emission units have been added since the original Title V permit became effective (October 12, 2008).

2.5 mmBtu/hr Tioga portable boiler
Ash handling
Handling of spent dry scrubber solids
Lime unloading and proportioning
Gasoline storage tank
Kerosene storage tank

Diesel fuel storage tank
Use of absorbent material
General vehicle maintenance and servicing (assumed to include diesel fuel handling)
Laboratory
Piping and storage system for natural gas
Non-halogenated cold cleaning degreasers
Internal combustion engines of motor vehicles
Storage and handling of closed drums

K. Actual Emission Rates

Pollutant	Annual Emissions (tons)				
	2007	2008	2009	2010	2011
CO	1.93	1.95	1.67	1.41	1.21
NO_X	54.77	54.76	55.23	57.10	58.16
PM	1.04	1.04	1.07	1.10	1.12
SO_2	0.598	0.496	0.520	0.490	0.49
VOM	1.60	1.70	1.74	1.62	1.51
HCl	2.69	3.56	2.09	2.03	1.89